



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/896,507 | 06/29/2001 | Gavin G. Gibson | P5866 US | 8106 |
| 7590 | 01/03/2005 | | EXAMINER | |
| B. NOEL KIVLIN MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C. P.O. BOX BOX 398 AUSTIN, TX 78767-0398 | | | JEAN GILLES, JUDE | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2143 | |

DATE MAILED: 01/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|----------------------|---------------------|
| Office Action Summary | Applicant No. | Applicant(s) |
| | 09/896,507 | GIBSON ET AL. |
| | Examiner | Art Unit |
| | Jude J Jean-Gilles | 2143 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 29 June 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-49 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 June 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/06/02</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is responsive to communication filed on 06/29/2001.

Information Disclosure Statement

1. The references listed on the Information Disclosure Statement submitted on 11/06/2002 have been considered by the examiner (see attached PTO-1449A).

Double Patenting Rejections

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).
Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).
3. Claims 1-49 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-32 of copending Application No. 09/896,662. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the noticed problems below, which are just exemplary :

Claim 18 of Application # 09/896,662 contains every element of **claim 16** of the instant application and as such anticipates **claim 16** of the instant application.

Claim 19 of Application # 09/896,662 contains every element of **claim 17** of the instant application and as such anticipates **claim 17** of the instant application.

Art Unit: 2143

Claim 20 of Application # 09/896,662 contains every element of **claim 6** of the instant application and as such anticipates **claim 6** of the instant application.

Claim 23 of Application # 09/896,662 contains every element of **claim 29** of the instant application and as such anticipates **claim 29** of the instant application.

Claim 29 of Application # 09/896,662 contains every element of **claim 21** of the instant application and as such anticipates **claim 21** of the instant application.

Claim 32 of Application # 09/896,662 contains every element of **claim 28** of the instant application and as such anticipates **claim 28** of the instant application.

Claim 32 of Application # 09/896,662 contains every element of **claim 45** of the instant application and as such anticipates **claim 45** of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, and 30-32 are rejected under 35 U.S.C. 102(e) as being unpatentable by Mori (U.S. Patent No. 6,7678,839 B2).

Regarding claim 1: Mori discloses a method of isolating faulty links in a loop in a network (*fig. 1, items 100, 200, and 210; column 1, lines 55-61*), comprising:

testing a link between a last device and an initiator in the loop (*column 4, lines 16-23; note that the suspected HDD causing the loop fault is the link being tested here*);
testing the loop between the initiator and the last device (*column 3, lines 61-67; column 4, lines 1-15*); and

if a faulty link is identified between the initiator and the last device, identifying a faulty loop segment and isolating the faulty link within the faulty loop segment (*column 8, lines 55-65; the object of maintenance here is the faulty link and bypassing device 20 in fig. 8 complete the isolation process*).

Regarding claims 2 and 31: Mori discloses both, the method of claim 1 and the system of claim 30, further comprising, repeating said testing the loop between the initiator and the last device, and said identifying the faulty loop segment, and said isolating the faulty link within the faulty loop segment until said testing the loop between the initiator and the last devices passes (*column 4, lines 16-36*).

Regarding claims 3 and 32: Mori discloses both, the method of claim 1 and the system of claim 30, further comprising identifying a faulty device (*column 8, lines 51-54*).

Regarding claim 30 : Mori discloses a system for isolating faulty links in a loop of network devices, including a last device and an initiator, comprising:
an interface to communicate with the loop of network devices [see Mori; *fig. 2, item 130; column 3, lines 7-13, and 39-43*];

a processing unit [see *Mori*; figs. 1-2, item 100; column 3, lines 43-45]; code executed by the processing unit to perform operations [see *Mori*; column 3, lines 21-24], the operations comprising:

- (i) testing via the interface a link between the last device and the initiator in the loop (*column 4, lines 16-23*);
- (ii) testing via the interface the loop between the initiator and the last device (*column 3, lines 61-67; column 4, lines 1-15*); and
- (iii) if a faulty link is identified between the initiator and the last device, identifying a faulty loop segment and isolating the faulty link within the faulty loop segment (*column 8, lines 55-65; the object of maintenance here is the faulty link and bypassing device 20 in fig. 8 complete the isolation process*).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-7, 13, 16-17, 20-22, and 28-29, 33-36, 42, 45-46 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mori* (U.S. Patent No. 6,7678,839 B2) in view of *Dimitroff et al* (U.S. Patent No. 6,209,023).

Regarding claims 4 and 33: Mori discloses the invention substantially as claimed. Mori teaches both the method of claim 1 as well as the system of claim 30. However, Mori is silent on a method wherein said testing the link between the last device and the initiator in the loop comprises performing a SCSI write buffer command and one or more SCSI read buffer commands.

In the same field of endeavor, Dimitroff et al disclose “ *a Fibre channel initiator that sends SCSI commands through SCSI-2 bridge whereas one of those commands is the a RELEASE command. In fig. 7, a RELEASE command 702 is detected (read) and a match is received, field values of the target device are compared with the World Wide Name table 400 of the initiator.* ” [see Dimitroff; column 9, lines 2-10; column 10, lines 25-28].

Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Dimitroff et al’s teachings using one or more CSCI read commands with the teachings of Mori, for the purpose of improving the ability of a network “ *...to provide analysis method to specify a faulty device and a disconnected location which respectively cause the trouble of a link in a system using a looped interface such as a fibre channel...* ” as stated by Mori in lines 55-61 of column 1.

Regarding claims 5 and 34: The combination Mori-Dimitroff teaches both, the method of claim 1 and the system of claim 30, wherein said testing the loop between the initiator and the last devices comprises performing one or more SCSI write buffer commands(via the interface) [see Dimitroff; column 9, lines 2-10, and 61-67; column 10,

lines 1-5; note that the RESERVE command when detected sets a status bit (Res) to the Res field ...]. By this rationale claims 5 and 34 are rejected.

Regarding claim 6: The combination Mori-Dimitroff teaches a method of testing links [see Mori; fig. 5, items 501-512] in a network loop, comprising:

writing a test pattern to a last device in the loop and reading the test pattern from the last device in the loop one or more times [see Dimitroff; column 9, lines 2-10, and 61-67; column 10, lines 1-5; column 9, lines 2-10; note that the RESERVE command when detected sets(write) a status bit (Res) to the Res field and the RELEASE command is detected when a match(read) is received from the status bit];

determining whether a link between the last device and an initiator in the loop is a faulty link [see Mori; column 7, lines 13-21];

writing one or more test patterns to the last device one or more times [see Dimitroff; column 9, lines 2-10, and 61-67; column 10, lines 1-5; note that the RESERVE command when detected sets a status bit (Res) to the Res field.];

determining whether a loop segment between the initiator and the last device includes at least one faulty link [see Mori; column 8, lines 51-65]. By this rationale **claim 6** is rejected.

Regarding claims 7 and 36 and 46: The combination Mori-Dimitroff teaches the method of claim 6 and the system of claim 35, further comprising isolating the at least one faulty link in the loop segment [column 8, lines 61-65; column 9, lines 28-34]. By this rationale **claim 7, 36, and 46** are rejected.

Regarding claims 13 and 42: The combination Mori-Dimitroff teaches the method of claim 6, further comprising isolating a faulty device from the faulty link [see Mori; *column 8, lines 51-59*]. By this rationale **claims 13 and 42** are rejected.

Regarding claim 16: The combination Mori-Dimitroff teaches a method of testing links in a network loop, comprising:

sending a SCSI write buffer command to a last device in the network loop [see Dimitroff; *column 9, lines 2-10, and 61-67; column 10, lines 1-5; note that the RESERVE command when detected sets a status bit (Res) to the Res field...*]

sending one or more SCSI read buffer commands to the last device [see Dimitroff; *column 10, lines 1-5; column 9, lines 2-10; note that the RELEASE command is detected when a match(read) is received from the status bit*];

determining whether the link between the last device and an initiator in the network loop is a faulty link [see Mori; *column 8, lines 35-65*];

sending one or more SCSI write buffer commands to the last device [see Dimitroff; *column 9, lines 2-10, and 61-67; column 10, lines 1-5; note that the last device is the last bypassed device as stated by Mori in column 60 of line 8*];

determining whether a loop segment between the initiator and the last device includes at least one faulty link [see Mori; *column 8, lines 35-65*]. By this rationale **claim 16** is rejected.

Regarding claim 17: The combination Mori-Dimitroff teaches the method of claim 16, further comprising isolating the at least one faulty link in the loop segment [see Mori, *column 8, lines 55-61*]. By this rationale **claim 17** is rejected.

Regarding claims 20 and 49: The combination Mori-Dimitroff teaches the method of claim 16 and the system of claim 45, further comprising isolating a faulty device from the faulty link. [see *Mori, column 8, lines 55-61*]. By this rationale **claims 20 and 49** are rejected.

Regarding claim 21: The combination Mori-Dimitroff teaches a machine readable medium containing executable program instructions, which when executed on a digital processing system cause the digital processing system to perform a method comprising:

writing a test pattern to a last device in the loop and reading the test pattern from the last device in the loop one or more times [see *Dimitroff; column 9, lines 2-10, and 61-67; column 10, lines 1-5; column 9, lines 2-10; note that the RESERVE command when detected sets(write) a status bit (Res) to the Res field and the RELEASE command is detected when a match(read) is received from the status bit*];

determining whether a link between the last device and an initiator in the loop is a faulty link [see *Mori; column 7, lines 13-21*];

writing one or more test patterns to the last device one or more times [see *Dimitroff; column 9, lines 2-10, and 61-67; column 10, lines 1-5; note that the RESERVE command when detected sets a status bit (Res) to the Res field.*];

determining whether a loop segment between the initiator and the last device includes at least one faulty link [see *Mori; column 8, lines 51-65*]. By this rationale **claim 21** is rejected.

Regarding claim 22: The combination Mori-Dimitroff teaches the machine readable medium of claim 21, wherein said method further comprising isolating the at least one faulty link in the loop segment. [see *Mori, column 8, lines 55-61*]. By this rationale **claim 22** is rejected.

Regarding claim 28: The combination Mori-Dimitroff teaches machine readable medium containing executable program instructions, which when executed on a digital processing system cause the digital processing system to perform a method comprising:

sending a SCSI write buffer command to a last device in the network loop [see *Dimitroff; column 9, lines 2-10, and 61-67; column 10, lines 1-5; note that the RESERVE command when detected sets a status bit (Res) to the Res field...*

sending one or more SCSI read buffer commands to the last device[see *Dimitroff; column 10, lines 1-5; column 9, lines 2-10; note that the RELEASE command is detected when a match(read) is received from the status bit];*

determining whether the link between the last device and an initiator in the network loop is a faulty link [see *Mori; column 8, lines 35-65*];

sending one or more SCSI write buffer commands to the last device[see *Dimitroff; column 9, lines 2-10, and 61-67; column 10, lines 1-5; note that the last device is the last bypassed device as stated by Mori in column 60 of line 8*];

determining whether a loop segment between the initiator and the last device includes at least one faulty link [see *Mori; column 8, lines 35-65*]. By this rationale **claim 28** is rejected.

Regarding claim 29: The combination Mori-Dimitroff teaches the machine readable medium of claim 28, wherein said method further comprising isolating the at least one faulty link in the loop segment [see *Mori*, column 8, lines 55-61]. By this rationale **claim 29** is rejected.

Regarding claim 35: The combination Mori-Dimitroff teaches a system for testing links in a loop of network devices, including a last device and an initiator, comprising:

an interface to communicate with the loop of network devices [see *Mori*; fig. 2, item 130; column 3, lines 7-13, and 39-43];
a processing unit [see *Mori*; figs. 1-2, item 100; column 3, lines 43-45];
code executed by the processing unit to perform operations [see *Mori*; column 3, lines 21-24], the operations comprising: a method of testing links in a network loop, comprising:

(i) writing via the interface a test pattern to a last device in the loop and reading the test pattern from the last device in the loop one or more times [see Dimitroff; column 9, lines 2-10, and 61-67; column 10, lines 1-5; column 9, lines 2-10; note that the RESERVE command when detected sets(write) a status bit (Res) to the Res field and the RELEASE command is detected when a match(read) is received from the status bit];

(ii) determining whether a link between the last device and an initiator in the loop is a faulty link [see *Mori*; column 7, lines 13-21];

(iii) writing one or more test patterns via the interface to the last device one or

more times [see *Dimitroff; column 9, lines 2-10, and 61-67; column 10, lines 1-5; note that the RESERVE command when detected sets a status bit (Res) to the Res field.*]; and

(iv) determining whether a loop segment between the initiator and the last device includes at least one faulty link [see *Mori; column 8, lines 51-65*]. By this rationale **claim 35** is rejected.

Regarding claim 45: The combination Mori-Dimitroff teaches a system for testing links in a loop of network devices, including a last device and an initiator, comprising:

an interface to communicate with the loop of network devices [see *Mori; fig. 2, item 130; column 3, lines 7-13, and 39-43*];

a processing unit [see *Mori; figs. 1-2, item 100; column 3, lines 43-45*]; code executed by the processing unit to perform operations [see *Mori; column 3, lines 21-24*], the operations comprising:

(i) sending a SCSI write buffer command via the interface to a last device in the network loop [see *Dimitroff; column 9, lines 2-10, and 61-67; column 10, lines 1-5; note that the RESERVE command when detected sets a status bit (Res) to the Res field...*]

(ii) sending one or more SCSI read buffer commands via the interface to the last device [see *Dimitroff; column 10, lines 1-5; column 9, lines 2-10; note that the RELEASE command is detected when a match(read) is received from the status bit*];

(iii) determining whether the link between the last device and an initiator in the network loop is a faulty link;

(iv) sending one or more SCSI write buffer commands via the interface to the last device [see *Dimitroff*; column 9, lines 2-10, and 61-67; column 10, lines 1-5; note that the last device is the last bypassed device as stated by Mori in column 60 of line 8]; and

(v) determining whether a loop segment between the initiator and the last device includes at least one faulty link [see *Mori*; column 8, lines 35-65]. By this rationale **claim 45 is rejected.**

Conclusion

8. Any inquiry concerning this communication or earlier communications from examiner should be directed to Jude Jean-Gilles whose telephone number is (571) 272-3914. The examiner can normally be reached on Monday-Thursday and every other Friday from 8:00 AM to 5:30 PM.

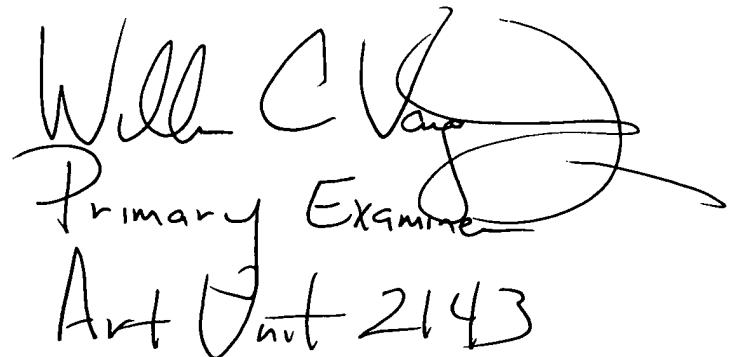
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3719.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Jude Jean-Gilles
Patent Examiner
Art Unit 2143

JJG

December 21, 2004


Primary Examiner
Art Unit 2143

